

## **ABSTRACT**

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The present invention provides oligonucleotide libraries capable of detecting RNA transcripts and RNA splice variants which populate a transcriptome and which are transcribed from genes or transcription units that populate the corresponding genome. The present invention also provides oligonucleotide arrays generated from the oligonucleotide libraries and methods of using the oligonucleotide libraries in various oligonucleotide detection systems and expression profiling studies. Antisense molecules and double-stranded interfering RNAs, which are types of oligonucleotides, based on the oligonucleotides disclosed herein also are provided.

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